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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,103	05/19/2006	Se-Yoon Jeong	CU-4826 WWP	5112

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EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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10/05/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,103	Applicant(s) JEONG ET AL.	
	Examiner DAVID CZEKAJ	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

The claims objected to because of the following informalities: Claim 1 is the only numbered claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turaga et al. (7042946), (hereinafter referred to as "Turaga") in view of Boliek et al. (6141446), (hereinafter referred to as "Boliek").

Regarding claim 1, Turaga discloses an apparatus that relates to wavelet based coding (Turaga: column 1, lines 24-27). This apparatus comprises "a MCTF for computing motion vectors of a GOP and filtering the GOP with respect to the temporal axis" (Turaga: column 2, lines 48-50; figure 2), "performing spatial wavelet transform on the filtered frame and outputting a wavelet coefficient" (Turaga: figures 3-4), and "entropy coding the motion vector" (Turaga: figure 2). However, this apparatus lacks the decomposition level as claimed. Boliek teaches that prior art video compression schemes are time consuming and memory intensive (Boliek: column 2, lines 56-60). To help alleviate this problem, Boliek discloses "quantizing the wavelet coefficient"

(Boliek: figure 2), "selecting a decomposition level and filter length for the wavelet unit based on motion estimation information, wherein the level and length are included in the stream" (Boliek: figures 1-3; column 16, lines 55-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Turaga and add the processing taught by Boliek in order to obtain an apparatus that helps reduce the processing time when analyzing video data.

Regarding claim 2, note the examiners rejection for claim 1, and in addition, Boliek discloses "low pass and high pass filtering a frame" (Turaga: figure 2-4; Boliek: figure 29).

Regarding claim 3, although not disclosed, it would have been obvious to have first and second wavelet transformers each having different decomposition levels and filter lengths (Official Notice). Doing so would have been obvious in order to process data more quickly.

Regarding claims 4-6, although not disclosed, it would have been obvious to selecting a 9/7, 5/3, or Haar filter (Official Notice). Doing so would have been obvious in order to correctly process the wavelet data.

Regarding claim 7, note the examiners rejection for claims 1 and 3.

Regarding claims 8-10, note the examiners rejection for claims 4-6.

Regarding claims 11-17, note the examiners rejection for claims 1-6.

Regarding claim 18, note the examiners rejection for claim 11.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6978048	12-2005	Higginbottom et al.
US-7023923	04-2006	Turaga et al.
US-5838377	11-1998	Greene

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID CZEKAJ whose telephone number is (571)272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Dave Czekaj/
Primary Examiner, Art Unit 2621